● PRINTER RUSH ●
(PTO ASSISTANCE)

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☐ CLM		☐ Document Legibility
☐ IIFW		☐ Fees
☐ SRFW		☐ Other
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☒ SPEC	8/30/99	

[RUSH] **MESSAGE:** Specification: page# 11 - line # 9 and page# 16 line # 6 serial NO. ____ is missing, please provide.

Page 16 line 23 ser. no. is missing (Subst HK)

Thank you.

[XRUSH] **RESPONSE:**

INITIALS: HK

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REV 10/04

The non-power-control-symbol gains include the gain G_s based on whether the information contained in the traffic signal is control information or voice and/or data, and the gain G of the traffic signal as determined by the signal's individual power control. When the information contained in the traffic signal is control information G_s can be any value between 1 and 2, and when the information contained in the traffic signal is voice and/or data G_s is equal to 1. Additionally, when the individual power level of the signal is scaled the scaling gain is also squared and multiplied by $G_s^2 * G^2$ to obtain the calculated power level. For example, the signal can be scaled as part of an overload power control method disclosed in U.S. patent application "Aggregate Overload Power Control", Serial No. 09356816 described in more detail below. When the individual power level of the signal is scaled, the scaling can be performed by multiplying the scaling gain by the gain G as determined by the individual power control, and then squaring the scaled gain and multiplying it by G_s^2 to obtain the calculated power level.

This calculated power level ($G_s^2 * G^2$) is compared with a minimum allowed power level LG^2 and with a maximum allowed power level MG^2. The max function compares the calculated power level with the minimum allowed power level LG^2 and selects the larger of the two values; and the min function compares the calculated power level with the maximum allowed power level MG^2 and selects the smaller of the two values. The minimum allowed power level LG^2 is the minimum allowed power level for non-power-control symbols as specified by the standard with which the system containing base station 200 complies. The maximum allowed MG^2 power level is the maximum power level at which it is beneficial to transmit a traffic signal on the forward link. Typically, the maximum allowed power level MG^2 can be selected to be between 50% and 80% of the power level at which the pilot is transmitted, although it can be between 50% and 100% of the power level at which the pilot is transmitted. A lower maximum allowed power level MG^2 improves capacity, but reduces the forward link coverage.

When the calculated power level ($G_s^2 * G^2$) is between the maximum MG^2 and minimum LG^2 allowed power level, the calculated power level ($G_s^2 * G^2$) is multiplied by the

transmission path. To take into this fact into account the power level PS[n] can be multiplied by the ratio of the actual path gain to the nominal path gain, as described above.

The method for determining the power level of the forward-link signal for a measurement interval can be used with methods of overload control. For example, this method can be used with the overload power control method disclosed in U.S. patent application "Aggregate Overload Power Control", Serial No. 09356816 incorporated herein by this reference. This overload power control method changes the power level of a set of forward-link signals responsive to a threshold power level that is based on the amplifier's maximum continuous power level, independent of the individual power control of each of the forward-link signals in the signal set. The power level of the signal set is changed by scaling it by a scaling factor. The total power level of the signal set is obtained during a current time period, and then the scaling factor that will be used in the subsequent time period is determined. The scaling factor is preferably based on the total power level of the signal set for the current time period, a scaling factor used during the current time period, and a threshold power level. The amount by which the total power level exceeds the amplifier's maximum continuous power level is the overload amount. The scaling factor is selected so that for each time period the overload amount is reduced by a percentage or a fixed factor. For example, the overload amount can be reduced by 3% for the current time period, and then the percentage by which the overload amount is reduced in a subsequent time period is based on the scaling factor of the current time period and the overload amount of the subsequent time period.

Additionally, the method for determining the power level the forward-link signal for a measurement interval can be used with initiating call blocking disclosed in U.S. patent application "Overload Control Utilizing Call Blocking", Serial No. 09356825 incorporated herein by this reference. This method initiates call blocking responsive to a call-quality measurement of the forward link. The call-quality measurement is a measurement of how well a mobile terminal is able to receive the forward link. For example, one call-quality measurement is the power fraction, which can be more accurately obtained using the current invention.

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Eibling 7-1-2

CONFIRMATION NO. 9591
DATE OF NOTICE OF ALLOWANCE: DECEMBER 28, 2005
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Application

Applicant(s): E.E. Eibling et al.
Case: 7-1-2
Serial No.: 09/385,725
Filing Date: August 30, 1999
Group: 2685
Examiner: Pablo N. Tran

Title: Aggregate Power Measurement

I hereby certify that this paper is being deposited on this date with the U.S. Postal Service as first class mail addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Signature: Date: January 30, 2006

AMENDMENT AFTER ALLOWANCE

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Alexandria, VA 22313-1450

Sir:

All claims of the above-noted application were allowed on December 28, 2005. Please amend ~~amend~~ the application in the manner indicated below.

IN THE CLAIMS

1. (Original) A method for determining a power level of a forward-link signal in a wireless system ~~system~~, the method comprising the steps of:

determining a plurality of power-indicative signal characteristic of the signal; and

determining the power level of the signal for a measurement interval using the power-indicative ~~indicative~~ signal characteristics, the measurement interval having a duration smaller than or equal to ~~to~~ the period in which at least one power-indicative signal characteristic can change.

2. (Original) The method of claim 1, wherein the measurement interval has a duration smaller than ~~than~~ or equal to the time period in which any of power-indicative signal characteristics can change.

3. (Original) The method of claim 1, wherein the power-indicative signal characteristics comprise ~~comprise~~ an information rate of the signal.

4. (Original) The method of claim 1, wherein the power-indicative signal characteristics comprise ~~comprise~~ a gain of the signal as determined by the signal's individual power control.

5. (Original) The method of claim 1, wherein the power-indicative signal characteristics comprise ~~comprise~~ whether the information contained in the signal is control information.

6. (Original) The method of claim 1, wherein the power-indicative signal characteristics comprise ~~comprise~~ whether the call is in set up.

7. (Original) The method of claim 1, wherein the power-indicative signal characteristics comprise ~~comprise~~ whether the call is in soft-handoff.

8. (Currently amended) A method for determining a power level of a set of forward-link signals ~~signals~~ transmitted by a base station in a wireless system, the method comprising the ~~step~~ steps of:

determining a plurality of power-indicative signal characteristics of each of the ~~signal~~ signals in the ~~the~~ signal set;

determining the power level of ~~the~~ each of the signals for a measurement interval using the ~~power~~-indicative signal characteristics, the measurement interval having a duration smaller than or ~~equal~~ to the time period in which at least one power-indicative signal characteristic can change; and

determining the power level of the signal set for the measurement interval using the power ~~levels~~ of each of the signals.

9. (Currently amended) The method of claim 8, wherein the measurement interval has a ~~duration~~ smaller than or equal to the time period in which any of the power-indicative signal ~~characteristics~~ can change.

10. (Currently amended) The method of claim 8, wherein:

the step of determining the power level of the each of the signals in the signal set comprises, ~~in~~ a channel unit controller:

obtaining an information rate of a signal and a gain of the signal as determined by ~~the~~ signal's individual power control;

multiplying the information rate of the signal and the gain squared of the signal to ~~obtain~~ the power level of the signal; and

forwarding the power level of each signal to a master controller; and

the step of ~~the~~ determining the power level of the signal set comprises summing the power ~~level~~ of each signal in a master controller.

11. (Currently amended) The method of claim 8, wherein the step of determining the power ~~level~~ of ~~the~~ each of the signals in the signal set comprises, in a master controller:

obtaining an information rate of a signal and a gain of the signal as determined by the ~~signal's~~ individual power control; and

multiplying the information rate of the signal and the gain squared of the signal to obtain the ~~power~~ level of the signal.

12. (Original) The method of claim 8, wherein the power-indicative signal characteristics ~~comprise~~ an information rate of the signal.

13. (Original) The method of claim 8, wherein the power-indicative signal characteristics comprise ~~comprise~~ a gain of the signal as determined by the signal's individual power control.

14. (Original) The method of claim 8, wherein the power-indicative signal characteristics comprise ~~comprise~~ whether the information contained in the signal is control information.

15. (Original) The method of claim 8, wherein the power-indicative signal characteristics comprise ~~comprise~~ whether the call is in set up.

16. (Original) The method of claim 8, wherein the power-indicative signal characteristics comprise ~~comprise~~ whether the call is in soft-handoff.

17. (Original) The method of claim 8, wherein the signal set comprises all the signals in a sector ~~sector~~ of a cell in which the base station is located.

18. (Original) The method of claim 8, wherein the signal set comprises all the signals amplified ~~amplified~~ by an amplifier of the base station.

19. (Original) The method of claim 8, wherein the signal set comprises a plurality of traffic signals. ~~signals.~~

20. (Original) The method of claim 8, wherein the signal set comprises a plurality of traffic signals ~~signals~~ and at least one control signal.

21. (Original) The method of claim 8, wherein the measurement interval comprises a frame.

22. (Original) The method of claim 8, wherein the measurement interval comprises a power control ~~control~~ group.

REMARKS

The foregoing amendments are intended to correct minor typographical errors in the allowed claims of the above-noted application.

Respectfully submitted,

Date: January 30, 2006

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